

2. The method of estimating blood pressure of claim 1, wherein the physical characteristic information comprises sex, age, height and weight of the subject.

3. The method of estimating blood pressure of claim 2, wherein the determining comprises classifying the plurality of groups according to the hemodynamic characteristics based on a heartbeat, a systolic blood pressure, a diastolic blood pressure, a cardiac output, a total peripheral resistance, and a pulse transit time.

4. The method of estimating blood pressure of claim 1, wherein the detecting the bio-signal comprises detecting a signal in accordance with a change in pulse wave speed of light reflected off the subject.

5. The method of estimating blood pressure of claim 4, wherein the signal is a photoplethysmography (PPG) signal or a pulse transit time signal.

6. The method of estimating blood pressure of claim 5, wherein the extracted plurality of features comprises a systolic peak, a reflective peak, a systolic rising time, a reflective peak time, and a period of the PPG signal.

7. The method of estimating blood pressure of claim 1, wherein the learned blood pressure estimation algorithm corresponds to a learned artificial neural network algorithm.

8. The method of estimating blood pressure of claim 7, wherein the estimating the blood pressure based on the learned neural network algorithm comprises:

learning an artificial neural network algorithm; and
estimating the blood pressure by matching the extracted plurality of features to a hidden layer matrix of the learned artificial neural network algorithm.

9. The method of estimating blood pressure of claim 8, wherein the learning the artificial neural network algorithm comprises:

inputting the extracted plurality of features to an input layer of the artificial neural network algorithm;
inputting a systolic blood pressure and a diastolic blood pressure of the blood pressure information to an output layer of the artificial neural network algorithm; and
generating the hidden layer matrix having weights and thresholds of input values of the input layer in a hidden layer located between the input layer and the output layer.

10. A method of estimating blood pressure, the method comprising:

inputting physical characteristic information and blood pressure information of a subject;
detecting a bio-signal of the subject;
extracting a plurality of features from the detected bio-signal; and
estimating a blood pressure by inputting the extracted plurality of features, the physical characteristic information, and the blood pressure information to a learned artificial neural network algorithm.

11. The method of estimating blood pressure of claim 10, wherein the inputting the physical characteristic information of the subject comprises inputting information including sex, age, height and weight of the subject.

12. The method of estimating blood pressure of claim 10, wherein the detecting the bio-signal comprises detecting a

signal in accordance with a change in a pulse wave speed of light reflected off the subject.

13. The method of estimating blood pressure of claim 12, wherein the signal is a photoplethysmography (PPG) signal or a pulse transit time signal.

14. The method of estimating blood pressure of claim 13, wherein the extracted plurality of features comprises a systolic peak, a reflective peak, a systolic rising time, a reflective peak time and a period of the PPG signal.

15. The method of estimating blood pressure of claim 10, wherein the estimating the blood pressure comprises:

learning an artificial neural network algorithm; and
estimating a blood pressure by matching the physical characteristic information, the blood pressure information, and the extracted plurality of features to a hidden layer matrix of the learned artificial neural network algorithm.

16. The method of estimating blood pressure of claim 15, wherein the inputting the physical characteristic information and the blood pressure information comprises determining, among a plurality of groups classified algorithmically according to hemodynamic characteristics, a group to which the subject belongs.

17. The method of estimating blood pressure of claim 16, wherein the learning the artificial neural network algorithm comprises:

inputting the physical characteristic information, the blood pressure information, and the extracted plurality of features to an input layer of the neural network algorithm;
inputting a systolic blood pressure and a diastolic blood pressure of the blood pressure information to an output layer of the neural network algorithm; and
generating the hidden layer matrix having weights and thresholds of input values of the input layer in a hidden layer between the input layer and the output layer.

18. An apparatus for estimating blood pressure comprising:

a biometric information input unit configured to input physical characteristic information and blood pressure information of a subject;
a sensor configured to emit light to the subject to be reflected from the subject and detect a signal from the reflected light;
a signal processor configured to obtain a bio-signal from the detected signal;
a memory configured to store a blood pressure estimation algorithm; and
a central processing unit (CPU) configured to determine, among a plurality of groups classified according to hemodynamic characteristics, a group to which the subject belongs based on the physical characteristic information and the blood pressure information, extract a plurality of features from the bio-signal, and execute the blood pressure estimation algorithm to estimate a blood pressure corresponding to the extracted plurality of features and the determined group.

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